INSTITUTIONAL BIOSAFETY COMMITTEE

UNIVERSITY *of* WASHINGTON

Meeting Minutes

Date: Wednesday, December 13, 2023
Time: 10:00 AM – 12:00 PM

Location: Zoom

Members Present:

1. Jim Boonyaratanakornkit, Allergy and Infectious Diseases
2. Thea Brabb, Comparative Medicine *(Animal Containment Expert)*
3. Jason Cantera *(Community Member)*
4. Lesley Colby, Comparative Medicine *(Animal Containment Expert)*
5. Lesley Decker, Environmental Health & Safety (*Biosafety Officer*)
6. Erin Heiniger, Department of Bioengineering *(Laboratory Specialist*)
7. Richard Grant, Washington National Primate Research Center
8. Kevin Hybiske, Allergy and Infectious Diseases *(IBC Vice Chair)*
9. David Koelle, Allergy and Infectious Diseases
10. Stephen Libby, Laboratory Medicine *(Animal Containment Expert)*
11. Jennifer Nemhauser, Department of Biology (*Plant Expert*)
12. Susan Parazzoli *(Community Member)*
13. Jason Smith, Microbiology (*IBC Chair*)
14. Paul Swenson, Seattle-King Co. Dept. of Public Health (*Community Member*)

Commonly Used Abbreviations
AAV: adeno-associated viral vector
BSL: Biosafety level
BSL-2w/3: BSL-2 with BSL-3 practices
BSO: Biosafety officer
BUA: Biological Use Authorization
DURC: Dual Use Research of Concern
IACUC: Institutional Animal Care and Use Committee
IBC: Institutional Biosafety Committee
iPS: induced pluripotent stem cells
NHP: non-human primate
NIH: National Institutes of Health
PI: Principal Investigator
rDNA: Recombinant or synthetic DNA/RNA
RG: Risk Group
SOP: standard operating procedure
Source material: blood, tissue, body fluids, and cell lines

1. **CALL TO ORDER:** The Institutional Biosafety Committee (IBC) Chair called the meeting to order at 10:01 a.m. A quorum was present.

2. **REMINDER:** The IBC Chair reminded attendees that any notes that they retain are subject to public disclosure. A statement was also made about conflict of interest and voting on research proposals as described in the IBC Charter. This includes sharing a grant or a familial relationship.

3. **APPROVAL OF MINUTES:**
   - The IBC Chair sought a motion to approve the minutes from the November 15, 2023 meeting.
   - A member made a motion to approve the November 15, 2023 meeting minutes. Another member seconded the motion.
   - The committee voted unanimously to approve the November 15, 2023 meeting minutes.

4. **OLD BUSINESS:**
   - At the November 15, 2023 meeting, Dr. Abkowitz's BUA was approved pending successful completion of the lab inspection. This BUA is still pending.
   - At the November 15, 2023 meeting, Dr. Bitto's BUA was approved pending successful completion of the lab inspection response. This BUA has been sent out.
   - At the November 15, 2023 meeting Dr. Bryers' BUA was approved application updates. This BUA is still pending.
   - At the November 15, 2023 meeting, Dr. MacLellan's BUA was approved pending updates to the application and successful completion of the lab inspection. This BUA is still pending.
   - At the November 15, 2023 meeting, Dr. Qu's BUA was approved pending successful completion of the lab inspection and an update to the BUA letter. This BUA is still pending.
   - At the November 15, 2023 meeting, Dr. Stolla's BUA was approved pending successful completion of the lab inspection. This BUA is still pending.

5. **BIOSAFETY OFFICER (BSO) REPORT***:* The Biosafety Officer Report includes projects involving: (1) recombinant or synthetic nucleic acids covered under section III-E and III-F of the *NIH Guidelines,* (2) non-recombinant biological agents requiring BSL-2 with BSL-3 practices containment or lower, and (3) administrative updates, such as room additions.

   a. Biosafety Officer Report
      - Dr. Bomsztyk renewed in vitro work with rDNA and human source material to the BUA *Epigenetics and Disease Pathways* (Section III-F).
      - Dr. Gardiner added the use of human iPS cells to the BUA *Bone cell regulation.*
      - Dr. Risques renewed in vitro work with rDNA and human source material to the BUA *Molecular biomarkers for early cancer detection, prediction, and prognosis* (Section III-F).
      - Dr. Hoofnagle added a room for in vitro use of previously approved agents to the BUA *Analysis of human samples for the development of novel diagnostic assays in the clinical laboratory and for the investigation into nutrition, obesity, kidney disease, and cardiovascular disease and neurodegenerative diseases*.
      - Dr. Robinson registered work for use of human source material in humans to the BUA *Bone Marrow Mesenchymal Stem Cell Derived Extracellular Vesicles for Hospitalized Patients with Moderate-to-Severe ARDS: A Phase Ill Clinical Trial*.
      - Dr. Greenberg added in vitro work with wildtype Achromobacter xylosoxidans and Stenotrophomonas maltophilia to the BUA *Quorum Sensing in Burkholderia mallei*.

- Dr. Hung renewed influenza virus (mouse adapted strains) work in mice and in vitro. They also renewed in vitro work with non-viral rDNA to the BUA *Role of pericytes in lung injury and repair* (Sections III-E and III-F).
- Dr. Derdeyn was approved for in vitro work with cells pre-approved by EH&S and the IBC for BSL-1 and BSL-2 containment and practices to the BUA *Flow Cytometry Cost Center*.
- Dr. Bremner renewed their in vitro work with human source material to the BUA *Bremner Research Lab*.
- Dr. Stergachis renewed their in vitro work with rDNA and human source material to the BUA *Single-molecule chromatin architectures of disease-associated non-coding genetic variants* (Section III-F).
- Dr. Hung added rooms for in vivo work with previously approved agents to the BUA *Role of pericytes in lung injury and repair.*
- Dr. Colby removed an ABSL-2 room from the BUA *Refer to the Comparative Medicine Animal Biosafety Level 2 Biocontainment Facilities*.
- Dr. Rabinowitz registered work at non-UW sites to the BUA *One Health/Avian Influenza - Georgia*.
- The IBC Chair a motion to approve this month's Biosafety Officer Report.
- A member made a motion to approve this month's Biosafety Officer Report. Another member seconded the motion.
- <u>The Committee unanimously voted to approve this month's Biosafety Officer Report.</u>

6. INDIVIDUAL PROJECT REVIEWS

a. Adams Waldorf, Kristina, renewal, *Experimental Model for Chorioamnionitis and Preterm Labor*

- Sections III-D and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Adams Waldorf lab aims to determine the effects of various bacterial diseases on pregnancy and the fetus with the goal of understanding pathogenesis and developing vaccines and therapeutics to prevent injury.
- This lab works with Streptococcus agalactiae in NHPs and rDNA in vitro.
- The lab was inspected, and all deficiencies have been corrected.
- All required trainings are complete.
- This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Adams Waldorf.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Adams Waldorf pending an update to the BUA letter.</u>

b. Bothwell, Mark, renewal, *iPSC models of neuromuscular disease*

- Sections III-D and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Bothwell lab aims to understand the functional and biochemical properties of differentiated stem cells to characterize disease mechanisms.

- This lab works with replication deficient Sendai viral vector, recombinant West Nile virus, third generation lentiviral vectors, and human source material in vitro.
- A lab inspection has been performed and is still pending a response.
- The required trainings are still pending.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Bothwell.
- The Committee voted unanimously to approve the draft BUA for Dr. Bothwell pending completion of the required trainings and lab inspection response.

c. Iritani, Brian, change, *Gene Function in Lymphpoiesis and Cancer*

- Sections III-D and III-E
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Iritani lab is adding the use of wild type lab-adapted Armstrong 53b strain lymphocytic choriomeningitis virus (LCMV), and recombinant strains of Vesicular stomatitis virus (VSV) and E. coli k-12 in mice.
- A discussion occurred regarding occupational health requirements for the lab-adapted Armstrong 53b strain of LCMV and if medical counseling should be offered due to reproductive hazards.
- A lab inspection was not required as the lab was recently inspected.
- All required trainings are complete.
- This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Iritani.
- The Committee voted unanimously to approve the draft BUA for Dr. Iritani pending an update to the BUA letter to include information about reproductive hazards.

d. Jerome, Keith, renewal, *Understanding viral antibody resistance*

- Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Jerome lab aims to develop a platform to prevent viral escape from human antibodies.
- This lab works with several Risk Group 2 human coronaviruses, non-pathogenic E. coli, influenza A and B virus strains, human herpes virus, human parainfluenza virus, human metapneumovirus, HIV, SHIV, vaccinia virus, lentiviral strains, monkeypox virus nucleic acid, COVID-19 clinical samples, and rDNA in vitro.
- The lab inspection is scheduled for after the IBC meeting.
- The required trainings are still pending.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Jerome.
- The Committee voted unanimously to approve the draft BUA for Dr. Jerome pending successful completion of the lab inspection and required training.

e. Levy, Karen, renewal, *Levy Research Group ChEEP ChEEP, EcoMiD, EcoZur, PAASIM*

- Sections III-D and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Levy lab aims to detect and quantify pathogenic and indicator microorganisms in environmental media and clinical samples.

- This lab works with rDNA, multiple virus strains including SARS-CoV-2, and multiple bacteria strains including Salmonella typhimurium in vitro.
- The lab was inspected, and all deficiencies have been corrected.
- All required trainings are complete.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Levy.
- The Committee voted unanimously to approve the draft BUA for Dr. Levy.

f. McGuire, Andrew, change, *Proof of Concept for an EBV Vaccine*

- Section III-D
- The assigned IBC Primary Reviewer presented the Primary Review.
- The McGuire lab added the use of recombinant or synthetic nucleic acids with enhanced gene delivery methods in NHPs.
- A lab inspection was not required as all work takes place inside a vivarium.
- All required trainings are complete.
- This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. McGuire.
- The Committee voted unanimously to approve the draft BUA for Dr. McGuire.

g. Mizumori, Sheri, renewal, *Neuromodulatory Control of Reward Neurocircuitry and Memory*

- Section III-D
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Mizumori lab aims is to discover the mechanisms by which neural circuits of the brain change their function which influences future, learning, memory, and flexible decisions.
- This lab works with adeno-associated viral vectors and canine adenoviral vector (E1a deleted), replication deficient in rats.
- A discussion occurred regarding the nomenclature for the canine adenoviral vectors. The biosafety officer will confirm the correct agent name and update the BUA letter accordingly.
- A lab inspection has been performed and is still pending a response.
- All required trainings are complete.
- This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Mizumori.
- The Committee voted unanimously to approve the draft BUA for Dr. Mizumori.

h. Pepper, Marion, change, *The Differentiation and Protective Function of Memory T and B cells*

- Sections III-D and III-E
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Pepper group added the use of recombinant nucleic acids in mice.
- A lab inspection was not required as all work takes place inside a vivarium.
- All required trainings are complete.
- The IACUC protocol is still pending.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Pepper.

- The Committee voted unanimously to approve the draft BUA for Dr. Pepper.

i. Tian, Rong, renewal, *Energetics and Metabolism of the heart*
- Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Tian lab aims to define the roles of altered energy metabolism in the development of cardiac hypertrophy and heart failure.
- This lab works with adenoviral vectors and adeno-associated viral vectors in mice and in vitro. They also work with lentiviral vectors, rDNA, and non-pathogenic strains of E. coli in vitro.
- A lab inspection has been performed and is still pending a response.
- All required trainings are complete.
- The IACUC protocol is still pending.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Tian.
- The Committee voted unanimously to approve the draft BUA for Dr. Tian pending successful completion of a lab inspection response and an update to the BUA letter.

j. Trapnell, Bruce, renewal, *Early Fish Development*
- Section III-D and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Trapnell lab aims to characterize effects of diverse genetic perturbations on each cell type in the zebrafish embryo.
- This lab works with transgenic zebrafish. They also work with non-pathogenic strains of E. coli and rDNA in vitro.
- A lab inspection was not required as the lab was recently inspected.
- All required trainings are complete.
- This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Trapnell.
- The Committee voted unanimously to approve the draft BUA for Dr. Trapnell.

k. Yadav, Smita, renewal, *Signaling in neuronal development and disease*
- Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Yadav lab aims to understand the molecular function of proteins that have been found to be mutated in patients with neurodevelopmental disorder phenotypes.
- This lab works with non-pathogenic strains of E. coli, third generation lentiviral vectors, and rDNA (with and without enhanced gene delivery methods) in vitro.
- The lab inspection is scheduled for after the IBC meeting.
- All required trainings are complete.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Yadav.
- The Committee voted unanimously to approve the draft BUA for Dr. Yadav pending successful completion of the lab inspection.

7. SUBCOMMITTEE REPORTS:

l. Goss, Christopher, new, *A Phase 2, Multi-Center, Double-Blind, Randomized, Placebo-Controlled Study to Evaluate the Safety, Phage Kinetics, and Efficacy of Inhaled AP-PA02 Multi-Phage Therapeutic in Subjects with Non-Cystic Fibrosis Bronchiectasis and Chronic Pulmonary Pseudomonas aeruginosa Infection*

- NIH Guidelines not applicable
- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is a new industry-sponsored, multi-center, double-blind, randomized, placebo controlled, phase II study to evaluate the efficacy, safety, and phage kinetics of multiple inhaled doses of bacteriophage targeting Klebsiella pneumoniae. The dose will be administered as monotherapy and in combination with inhaled antibiotics and compared to placebo and inhaled antibiotics alone.
- Wildtype bacteriophage will be administered to humans.
- All required trainings are complete.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Goss. Another member seconded the motion.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Goss.</u>

m. Hawley, Jessica, new, *Phase 1/2 Dose-Escalation and Cohort Study of STEAP1 CART with Enzalutamide in Participants with mCRPC*

- Section III-C
- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is a first in human Investigator-Initiated, Phase 1/2 dose-escalation and cohort expansion study investigating the feasibility, safety, and preliminary efficacy of autologous STEAP1 CART cell therapy in men with metastatic castration-resistant prostate cancer (mCRPC).
- Human cells transduced with third generation lentiviral vectors will be administered to humans.
- All required trainings are complete.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Hawley. Another member seconded the motion.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Hawley.</u>

n. Schweizer, Michael, new, *A phase I safety and feasibility study of cellular immunotherapy for extensive stage small cell neuroendocrine prostate cancer using autologous T cells lentivirally transduced to express L1CAM-specific chimeric antigen receptor*

- Section III-C
- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is a phase 1, single site, semi-first-in-humans, dose-escalation trial to assess the safety and toxicity of FH-L1CAM CAR T, containing autologous T cells genetically modified to express a L1CAM-specific chimeric antigen receptor (CAR), following

lymphodepletion in participants with metastatic small cell neuroendocrine prostate cancer.
- Human cells transduced with third generation lentiviral vectors will be administered to humans.
- All required trainings are complete.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Schweizer. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Schweizer.

o. Shinohara, Michi, renewal, *A phase 1, open-label, safety and dosing study of autologous desmoglein 3 chimeric autoantibody receptor T cells (DSG3-CAART) in subjects with active, anti-DSG3, mucosal-dominant pemphigus vulgaris*
- Section III-C and III-D
- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is a phase 1, open-label, multi-site, first-in-humans, dose-escalation, industry-sponsored trial to determine the maximum tolerated dose (MTD) and dose fractionation of DSG3 CAR-T cell therapy in subjects with active, anti-DSG3, mucosal-dominant pemphigus vulgaris.
- Human cells transduced with third generation lentiviral vectors will be administered to humans. They will transduce patient cells in vitro in the Gene and Cell Therapy Core Facility.
- All required trainings are complete.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Shinohara. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Shinohara.

10. FOR YOUR INFORMATION: There was no additional information.

11. ISSUES FROM THE FLOOR & PUBLIC COMMENTS: There were no issues from the floor, and no public comments.

12. MEETING ADJOURNED AT APPROXIMATELY 11:39 P.M.